

Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 5 with the following amended paragraph:

This invention relates to Automatic Gain Control (AGC) used in [[a]] communication apparatuses, recording/reproduction apparatuses, and other signal-processing apparatuses.

Please replace the paragraph beginning at page 1, line 12 with the following amended paragraph:

FIG. 1 shows a first example of a prior delay AGC system. The input RF (Radio frequency) is supplied to and amplified by a variable-gain RF amplifier 13. Here, in order to simplify the explanation, the variable-gain RF amplifier 13 comprises a variable attenuator 131 and fixed-gain RF amplifier 132. The output signal of the variable-gain RF amplifier 13 is multiplied with the output sine wave from a local oscillator 14 by a mixer 15 and then the converted to an IF (intermediate frequency) signal. The IF signal output from the mixer is band-limited by a SAW (surface acoustic wave) filter 16 to only a signal in a desired channel. In other words, the SAW filter 16 removes signals such as the adjacent channel signals. Here, in order to simplify the explanation, the total power gain of the fixed-gain RF amplifier 132, mixer 15 and SAW filter 16 for the desired channel is taken to be unity. The output IF signal from the SAW filter is supplied to and amplified by a variable-gain IF amplifier 17, and then is digitized by an A/D converter 18 and input to a demodulation LSI 19. The demodulation LSI 19 demodulates the input IF signal by appropriate signal processing, and together with decoding the transmission-data sequence, it performs AGC of the gain G_{att} of the variable attenuator 131 and the gain G_{if} of the variable-gain IF amplifier such that the IF signal input to the A/D converter is at a suitable power P_{ref} . AGC is performed as follows. First, with the gains G_{att} and G_{if} set to proper values, the power P_{if} of the IF signal input to the A/D converter is calculated. The passband power P_{in} of the input signal of the system, or the RF signal input to the variable attenuator 131, can be calculated from P_{if} as shown below.

Please replace the paragraph beginning on page 2, line 25 with the following amended paragraph:

In order to solve this inconvenience, a method has been proposed in which a dedicated power detector is ~~be~~ placed in the RF stage, and is ~~that it be~~ used to independently control the RF gain. This is shown in FIG. 2.

Please replace the paragraph beginning on page 5, line 7 with the following amended paragraph:

In one aspect of the present invention, ~~the can be achieved by the AGC system of the present invention. The~~ AGC system of the present invention is provided with an RF amplifier; a local oscillator; a mixing unit that combines the output signal from the RF amplifier and the output signal from the local oscillator and generates an IF signal; a bandpass filter that limits the bandwidth of the IF signal; an IF amplifier that amplifies the output signal from the bandpass filter; a first A/D converter that converts the output signal from the bandpass filter from analog to digital; a power detector that detects the power of the output signal from the RF amplifier; a filtering unit that filters the output signal from the power detector; a second A/D converter that converts the output signal from the filtering unit from analog to digital; and a controller to which both the output signal from the first A/D converter and the output signal from the second A/D converter are input, wherein the controller adjusts the gain of the RF amplifier and the gain of the IF amplifier based on the output signal from the first A/D converter and the output signal from the second A/D converter.

Please replace the paragraph beginning on page 5, line 24 with the following amended paragraph:

In another aspect of the present invention, ~~can be achieved by the AGC system of the present invention. The~~ AGC system of the present invention is, wherein the controller of the AGC system calculates both the power of the RF signal that is input to the RF amplifier and the power of the IF signal that is input to the IF amplifier, whose bandwidth is limited, based on the gain of the RF amplifier and the gain of the IF amplifier, and adjusts the gain of the RF amplifier and the gain of the IF amplifier based on the calculated powers.

Please replace the paragraph beginning on page 6, line 5 with the following amended paragraph:

In a further aspect of the present invention, ~~the can be achieved by the AGC system of the present invention. The AGC system of the present invention is, wherein said controller of the~~ AGC system calculates an error rate for the data outputted from the A/D converter, and adjusts the gain of said RF amplifier and the gain of said IF amplifier based on the calculated error rate.

Please replace the paragraph beginning on page 6, line 11 with the following amended paragraph:

In a further aspect of the present invention, ~~the can be achieved by the AGC system of the present invention. The AGC system of the present invention is, wherein said controller of the~~ AGC system calculates an error rate for the data outputted from the second A/D converter, and adjusts the gain of said RF amplifier and gain of said IF amplifier based on the calculated error rate.

Please replace the paragraph beginning on page 7, line 17 with the following amended paragraph:

The received RF signal that is received by the receiving antenna is supplied to the variable-gain RF amplifier 1 via the tuner-input terminal, and is amplified by the variable-gain RF amplifier 1. The mixing unit 3 mixes the amplified received signal with the oscillation signal from the local oscillator 2, and this mixed signal is input to the SAW filter 4 that limits the bandwidth. Here, only an IF signal that matches the IF is extracted, and input to the variable-gain IF amplifier 5. On the other hand, the output signal from the variable-gain RF amplifier 1 is also input to the power detector 6. The power detector 6 detects the power of output signal from the variable-gain RF amplifier 1. The output signal of the power detector 6 is ~~sent~~ sent to the low-pass filter 7. The low-pass filter 7 extracts the low-frequency component of the output signal from the power detector 6 and sends it to the adder 8. The adder 8 adds the detected power of the RF signal of just the low-frequency component with that of the IF signal output from the variable-gain IF amplifier, which has a higher frequency than the aforementioned low-

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frequency component, and outputs the result to the A/D converter 9. In other words, the output from the dedicated power detector 3 located in the RF stage is added to the IF signal, then A/D conversion of the added signal is performed. With this kind of configuration, it is possible to input the power information for the RF stage to the demodulation LSI 10. The demodulation LSI 10 separates out the low-frequency component from the input signal, and by detecting the power of this extracted signal, it is possible to obtain the power information for the RF signal, and by separating out the IF component from the input signal and detecting the power of this extracted signal, it is possible to obtain the output information for the IF signal.

Please replace the Abstract with the amended Abstract on a separate sheet in the Appendix hereto.